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XXV.—*Notes on South Formosa and its Birds.*

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I.—*Narrative of the Expedition of 1893.*

I LEFT Amoy on the 30th October, 1893, for Tainan *, the port in South Formosa open to foreign trade, Mr. A. Macgowan (of Messrs. Tait & Co., Amoy) having kindly asked me to come over and visit him at Anping, and thence go up country to collect birds:

The morning of the 31st saw us not many miles distant from the coast. The high mountains, which form the backbone of Formosa, appeared in the far distance, plainly visible at sunrise, but soon to disappear as the sun rose over the horizon. Drawing near the low surf-beaten coast, we headed for a clump of trees and some houses, surmounted by a low mound, where the old Dutch fort stands, and anchored outside the Anping bar, about a mile and a half from the shore. On landing I found breakfast waiting at Mr. Bain's house, during which I ascertained that an expedition to Baksa, a

* Formerly called Taiwanfoo, the capital of South Formosa. It is about three miles inland. The shipping ports of Tainan are Takow and Anping, but the former, some 25 miles down the coast, is now almost deserted.

place some 25 miles east of Anping, had been planned, the party to consist of Messrs. Bain, Macgowan, and myself. The English missionaries, who have a mission-house there, had put it at Mr. Bain's disposal. Thence we were to go on to Lakuli, about 15 miles further inland.

The country around Anping is perfectly flat; it is divided into cultivated fields by wide ditches, with banks overgrown with high grass. There are but few trees, and small bamboo-groves appear here and there at a certain distance from the sea. A short walk that I took on the afternoon after my arrival was of little interest, the only birds noticed being a few small Waders (*Ardea garzetta*), several *Lanius schach*, *Turtur chinensis* (one), some small birds frequenting long grasses and pandanus-hedges, which I took to be *Prinia inornata*, *Ixus sinensis*, and a flock of *Buchanga atra*, one of which I shot.

I went out one morning after Snipe with Capt. Hodgins, of the steamer I came in. As we went up the creek in a "tekpai" (a raft made of large bamboos) towards the Snipe-grounds we saw a good many shore-birds on the mud-flats, and a large flock of white birds in the distance like Spoon-bills, but we were too far off to be sure. We landed a few miles up the creek on a marshy place divided into fields by high banks, on either side of which were wide ditches. Snipe-shooting in this locality seems to be specially arduous work, as, in order to get at the birds, one has to cross the ditches, sometimes 3 feet deep, and often to walk amongst rushes with water up to one's knees; the Snipe, strange to say, being found in these places. We saw several—all, I believe, *Gallinago caelestis*; also many Golden Plovers (*Charadrius fulvus*), *Totanus glareola*, various Sand-Plovers and Stints, and a few *Buchanga atra*, with strange Formosan ways new to me. A good many Larks (*Alauda wattersi*) were about the dry fields, as well as Pipits (*Anthus cervinus*) and Wag-tails (*Motacilla taiwana*). We saw also a large gathering of Grey Herons (*Ardea cinerea*), several *Ardea alba*, and a smaller species, which I took to be *A. garzetta*. We were back in Anping at 10.30, as the heat was very great.

On Nov. 3rd Mr. Bain and I started for Baksa. We had a delightful ride along the fine wide military road which leads up to the city suburbs. On reaching the streets we took to our chairs. I noticed a few cage-birds in the shops—*Trochalo-
pteron taivanum*, Larks, and Crested Mynahs. One or two wretched Buff-backed Herons (*Bubulcus coromandus*), with their white winter plumage dyed pink, were seen in one dirty laue. It is not an uncommon sight in some Chinese towns—Amoy, for instance—to meet with these birds, perfectly unconcerned, standing or wandering in some filthy alley.

Leaving the city Taiwanfoo, we travelled through some charming country. The road, sometimes a narrow lane, but often a wide track bordered by hedges of pandanus and other southern plants, led through fields of magnificent sugar-cane from ten to twelve feet high. Now and then we came upon a picturesque village lost in a grove of bamboos, its houses standing in yards or gardens hidden from the wide sandy tracks by screens of tall prickly bamboo. Fine old mango-trees occasionally spread their branches over the way, their stalwart trunks and bold, though scanty, foliage making a pleasing variety in the landscape. As we progressed further inland water flowed over the road, which became really a wide shallow watercourse, contained within high banks, usually covered with luxuriant vegetation. There were a good many birds about the villages—*Myiagra azurea*, *Trochalo-
pteron taivanum*, *Ixus sinensis*, *Zosterops simplex*, &c., but I did not notice any Mynahs, which seem to be very scarce in South Formosa.

We halted for a short time towards 11 A.M. at a pretty little village called Kulsia. The next place we came to was Kwong-ti-bio, a populous market town, within a mile or so of the hills. We halted here for tiffin, taking shelter in a neighbouring temple. After the usual delay, inevitable when one has a large party of carriers, we started off again and went on through rice-fields until we reached the first hills—low mounds with scanty vegetation, the most conspicuous shrub upon them being the guava. Beyond these was a shallow river, flowing under some low sandstone cliffs, the banks of

which we followed for some time. I saw here a good many Sand-Martins (*Cotile sinensis?*), also Wagtails and Sand-Plovers of some kind, probably *Ægialites cantianus*. The scenery soon began to get very beautiful; the road led once more along the stream, and before long became merged in it, so that the carriers and bearers walked in the river-bed, which was firm, the water being shallow and muddy. Gradually woods appeared on the hill-sides, and these became steeper and steeper, and hemmed in the stream more closely, till we arrived at a spot where the hills seemed as if they would altogether stop our progress. The bed of the river had become rocky and pebbly, and the stream here issued forth out of a narrow pass, formed by the steep wooded slope on one side and a wall of sandstone cliffs on the other. The trees growing over the stream closed above our heads as, scrambling up the bank to avoid a deep pool, we crossed a narrow bamboo bridge which spanned the rivulet under their shade, and a few yards further on emerged into a pretty glen, one side of it shut in by a perpendicular wall of sandstone, while on the other the wooded hills came down in a rapid incline to the stream wending its way to the dark leafy tunnel we had just passed through.

From this glen the road keeps rising till the first tall ridge overlooking the Baksa valley is reached. Now it follows the hill-sides, a mere cut on the steep slopes, now it wanders up and down, into the valleys and straight over the hills, through tangled jungle and woods. Sometimes we found ourselves on a ridge overlooking ravines, whence the soil had been washed away, and which appeared as if furrowed by the tropical rains.

The formation of this mountainous country is of blue clay, the lower hills near the plain appearing to be formed of soft sandstone. When woods occur the trees do not seem to attain to any great size; they are mostly "lung-ngan," with here and there a few date-palms and an occasional mango appearing above the jungle and undergrowth of brushwood, sword-grass, bamboos, &c. I did not see or hear many birds on the way; in fact, the country seemed singularly devoid of

animal life. *Alcippe morrisonia*, *Pomatorhinus musicus*, *Ixus sinensis*, *Munia topela*, *M. acuticauda*, and a Dove or two were about all that I noticed.

Towards evening, as we drew near the top of the range, the ascent became very rapid. As far as we could see, for the evening haze was beginning to settle and had hidden the plain from view, a mass of steep and sharp-crested hills, the blue clay showing on their southern slopes, but many of the hill-sides still clothed in dense vegetation, unrolled itself in a succession of peaks, of which the outlines became gradually fainter and more rounded in shape as they faded away and disappeared in the evening mist. After passing through a belt of wood we reached the top of the hills, and, wandering down in the semi-darkness, found with some difficulty the inn where we were to spend the night, Baksa being unattainable that evening. The inn was not exactly a palace; still it surpassed my expectations, as it contained a small closet where Bain was able to put up his camp-bed, and I found ample space in the adjoining public room to sling my hammock.

Next morning we were up and stirring before daybreak, and as dawn appeared the exterior of our hotel and its surroundings were revealed to us. From the back of the inn, a long mud-walled shed, with a narrow yard in front and a belt of bamboos enclosing the whole, we overlooked the Baksa valley. The panorama was superb. Below us the slopes of our range came down in a rapid descent, the hill-sides all clothed in the most gorgeous tropical verdure—beautiful woods alternating with stretches of jungle formed of tall grasses and plants of all kinds intermingled in a wild and glorious confusion. On our left the valley was somewhat uneven, with steep hillocks rising up singly, or else forming a sort of connection with the opposite range. On the right the valley opened out into a flat cultivated plain, where groves of feathery bamboos, doubtless hiding farm-houses, were dispersed here and there in the midst of the rice-fields. The plain seemed to continue right out to the south, and probably extends to the Takow plain. Behind

Baksa, which lay a little to the N.E., snugly ensconced within its belts of bamboos and trees, and in front of us, were ranges of higher mountains, running nearly parallel to one another, and gaining in altitude as they receded towards the E. till they rose to a height of at least 7000 feet. We counted six ranges, including that on which we stood. The night before Bain's aneroid had registered 29·30 at the inn; the height of the range we were on was therefore 1800–2000 feet at the highest point. It is called "O Soa" (Black Mountain) by the natives of that locality.

While preparations were being made for a start I strolled on, following the path, which wound down the hill through thick woods and jungle. I heard many birds of various kinds, chiefly of the *Garrulax* tribe, but the cover was too thick, and I was unable to see or obtain anything of interest. It took us about an hour and a half to reach the foot of the hills; an hour's further walking brought us to the Baksa mission-house. Baksa is a picturesque little village, inhabited by Chinese and Pepohwans. The latter are the original inhabitants of the plain and have adopted Chinese civilization. They are agricultural, but are gradually being ousted from their lands and pushed back towards the hills by the Chinese. The men seen here and subsequently wore the *queue*, and in dress did not seem to differ much from the Chinese, but the women have their own way of dressing the hair, winding it round the head. Fine large eyes are characteristic of this race, and the cast of features is bold and rather handsome.

The village of Baksa is situated on flat ground at the foot of the second range, but several well-wooded hillocks, more or less connected with the higher hills, rise close by; most of them (as I found afterwards) are impenetrable, or very difficult of access, on account of the thick cover and prickly bamboos.

We now made enquiries as to the best way of getting to Lakuli, but had finally to give up the idea of going there, as it was nearly a day's journey further on, and our time was limited. So we decided to go on in the afternoon to Kamana, another station of the English missionaries, said to be not

far off, just over the next hills. We were informed that Mr. Holst had remained ten days here, and had left for Lakuli on the previous evening. This was another reason for not going there, as we should have interfered with each other's collecting. It was too hot to venture out of doors, so I helped my servant to skin some birds shot on the way, and whilst thus employed I purchased a young live "Hwanci" (*Trochalopteron taivanum*), which I afterwards brought back with me to Amoy. I also engaged the services of a native hunter, who promised to shoot for me that afternoon and on the following Monday; but he refused to shoot on Sunday, for religious reasons, being a Christian.

At 3 we resumed the march, and, following a steep path which ascended the hills at the back of Baksa, toiled up to their summit. There, much to my disgust, I discovered Kamana lying some three miles to the N.E., among paddy-fields, far away from the surrounding hills. The mountains on this side were nearly bare of trees, only sword-grass jungle or short grass covering their nakedness. This not very inviting prospect led to a conference as to the advisability of going on; and we decided to return to Baksa and make the best of the place till the time came for the return to Anping. On getting back to Baksa I found my shooting-man with two fine specimens of the Large Scimitar-bill of Formosa (*Pomatorhinus erythrocnemis*) and an *Alcippe morrisonia*. Later in the evening another man brought me two specimens of *Alcippe brunnea*, neatly wrapped in paper, showing that Mr. Holst had trained the natives to collect for him. Ants were a great pest here.

We were up again at dawn next morning, Nov. 5th, and started each in a different direction. Bain had as guide a bright little boy, son of the caretaker, who was to take him to some good partridge-ground; and I went off with a stolid son of Han, who took me up the hills behind the village, along the rocky bed of a now dry torrent. It was rather trying work and not at all interesting. The sword-grass jungle grew thick on either bank of the torrent, meeting over our heads, and in places we had to force our way

through it, the grass cutting my hands severely. At last we managed to get out into the open and climb up the side of the hill. There the cover (chiefly grass), though thick, was low, and quantities of small birds were disporting themselves out of reach, and generally out of sight too. They appeared to be Warblers of all sorts and Munias. I distinguished among the latter several *M. formosana*; but they soon flew down the hill and hid in the jungle. Wandering on, I came suddenly on a covey of Partridges sunning themselves near a small patch of rice. They were, I believe, the *Bambusicola sonorivox*. High up on the hill some Doves were cooing, the deep "cōō-cōō-rōō-cōō-cōō" being that of the *Turtur rupicola*. These Doves keep generally to the higher parts of the hills, where, perched on some solitary tree, they call to each other all day long. I now found myself in a ravine at the foot of the range, with high sword-grass jungle all round me. Several birds were calling, and I recognized the whistle of some large *Pomatorhini*. There were two, calling to each other, both of them invisible. The call, a deep melodious whistle, might be written "tiot-tiot-tio"; it was varied at times by another trisyllabic call, which, unfortunately, I did not take note of at the time. I waited in vain for these birds to show themselves, but, scenting danger, they kept well concealed. One of them, however, appeared twice, flying up to perch on a grass-stalk, but diving down again before I could put up my gun. It was a *Pomatorhinus erythrocnemis*. Another bird of the same tribe was calling close to me, the cry having almost a human sound, something like "cock-kee," uttered in a shrill loud tone. This place being quite hopeless, I went down the valley towards one of the well-wooded conical hillocks. This hill had a fairly sparse undergrowth of bushes of various kinds under the trees, and was sufficiently easy walking, but there were few birds about. However, a party of *Alcippe brunnea* was diligently hunting about under the bushes. They were very tame—too tame, in fact—as it was difficult to get a specimen without blowing it to pieces. The birds shot were, besides, in moult. On reaching the top of the

hill I disturbed a magnificent Crested Eagle (*Spizaëtus nipalensis?*), which sailed off slowly to perch some hundred yards away on a tall tree commanding the wood. In an ill-advised attempt to get near the bird, I managed to lose myself in the jungle, coming out in the valley in a sorry condition after half an hour's struggle with thorns, and creeping and climbing plants, which twisted round me and refused to let go. But worst of all were the prickly bamboos, with their little hooks at every joint, which tore my clothes to shreds. It had begun to be so hot that the hills, eagle and all, were given up for that day and I went straight home.

It was terribly hot all day, and we were obliged to keep to the house. To pass the time I skinned some birds, assisted by my coolie. A man brought me a *Trochalopteron taivanum*, a *Motacilla taivana*, of which there are great numbers in the rice-fields, and a *Buchanga atra* in moult. The moulting-season seems very late here, and some birds apparently go on breeding until late in the autumn, for many of the birds I procured on this trip were still in full moult, and nestlings of *Munia topela*, barely able to fly, were brought to me several times. I noticed but few cage-birds in this locality; Munias and a *Trochalopteron taivanum* were the only species kept by the natives. A live Kestrel (*Falco tinnunculus*), evidently just caught, was brought to me for sale. Late in the afternoon I procured a male *Myiagra azurea*.

On the 6th I again ventured up the hills, setting off at daybreak. Bain took another direction, as before. This time my guide took me up the mountains immediately behind the village. The result was little better than that of the previous day, and sword-grass jungle, Munias, and Grass-Warblers (not recognized) were about all that I saw at first. I heard the large *Pomatorhinus* and Partridges calling. A stiff climb up the steep path that leads to Kamana brought us to the top of the range. Doves, which I was anxious to get, were cooing in some ravines inaccessible from below, and, despite the remonstrances of the native, I attempted to get at them from above by walking through the grass jungle on

the brow of the hill. After a lot of trouble I only succeeded in shooting a pretty little Hawk (*Accipiter virgatus*), but a climb down the least precipitous part of the hill brought us to some gullies, where I got one of the Doves, which was, after all, only *Turtur rupicola*. A visit to one or two of the adjacent wooded hillocks only produced a *Myiagra azurea* and a *Zosterops simplex*. There were also a few other birds about, among them *Alcippe morrisonia*, busily hunting for insects along the boughs of the trees overhead, which I did not care to shoot. I went home very early, as we had to be off that afternoon. It was again very hot, just as on the previous day.

Several shooting-men turned up in the forenoon with birds, some of them very interesting to a new comer; a fine female Sparrow-Hawk (*Accipiter virgatus*), *Spizixus cinereicapillus* (in full moult), *Hypsipetes nigerrimus*, *Pomatorhinus musicus*, *Sibia auricularis*, *Stachyridopsis ruficeps*, *Iyngipicus scintilliceps*, and a specimen of the small Formosan hare. I was thus kept busy all the forenoon, working hard with my servant at the captures brought in by the natives, who evidently knew where to look for birds. These men, delighted at the price paid for the birds, eagerly inquired every time they came in how much longer we were going to stay, and would set off immediately on a new search, to return with perhaps one or two interesting birds. Had I had any time to spend here it would have been easy to obtain specimens of many species.

We left Baksa towards 2 P.M., bound for the inn on the Black Mountain, where we were to sleep that night, and reached the place after a hot walk. We met on the way one of the shooting-men, who was waiting for us with a couple more birds, an *Alcedo bengalensis* and a *Hypsipetes nigerrimus*, a young bird just beginning to put on the adult plumage. We also purchased a Partridge from a small boy. I now saw, when too late, that I had made a great mistake in looking for birds on the Baksa side of the valley, where only the lower hills were wooded. The "O Soa," being nearly all wooded, would have proved a much better locality.

We left the inn very early on the morning of the 7th. I heard many birds on the hills, but, not having time to stop, I only shot a *Pomatorhinus musicus* that was whistling in a hedge near the path. On getting to the glen, mentioned above, where the climbing practically began, I noticed among the stones in the bed of the stream some sea-shells, and picking them up found them to be quite fossilized. I made a rapid search and found quantities of large oysters, two kinds of cockles, one or two bits of madrepores, and a bone of some large animal, and what appeared to be a molar of a large elephant. I hope that some enterprising palæontologist may visit this spot, which cannot fail to produce interesting material.

We had had enough of Kwong-ti-bio the last time we were there, so halted instead at Kulsia, where we found Bain's ponies, and, after a change of clothes and a rest, we rode off and reached Anping that afternoon.

The birds noticed on the way were—many *Cotile sinensis* (at the sandstone cliffs near the plain), *Motacilla leucopsis*, Sand-Plovers, *Tringoides hypoleucus*, a Buzzard, *Myiagra azurea*, and a pair of Mynahs (*Acridotheres cristatellus*) just inside the last hills; these Mynahs were the first noticed in Formosa.

I went down to Takow next day, Nov. 8th. It presents a very different appearance from Anping. The entrance to the harbour is a narrow passage between Apes' Hill and a low bluff called Saracen's Head, which are both of coralline limestone, and were probably separated at no very distant date by an earthquake. Apes' Hill is 1110 feet above the sea; it is a long, bare hill, with an undulating plateau on its S. and E. aspects. The lagoon is bounded on the N. and N.E. by low mangrove-swamps, beyond which are Chimkim, where the Catholic missionaries have a church and mission-house, and, further up the lagoon, the village of Ling-a-liao. The lagoon extends some seven miles to the south, and is separated from the sea by a low sand-spit connected with the bluff.

Most of the 9th of November was spent in obtaining infor-

mation about Bangkimtsing, a village some 25 miles E. of Takow, which I had been recommended to visit.

November 10th. Fine, not too hot. I left towards 6 A.M. in the boat Father Giner had sent to take me across the lagoon to Chimkim. I saw, flying over the marshes, a pair of striped Harriers (*Circus spilonotus*) and two Spoonbills, and past Chimkim I noticed a few Crested Mynahs. The road from Chimkim to Bangkimtsing leads through an entirely flat country, some low hills bounding the horizon on the N. and S.W. Rice is the chief crop near Takow, but there are also fields of sugar-cane, sweet potatoes, and ground-nuts; and just outside Pithan, a market-town six miles from Takow, there were some market-gardens. Beyond Pithan there seems to be more sugar, and the country began to get more and more arid, till we reached a wild sandy waste, scantily covered with long, coarse grass, which was now quite dry and burnt up by the summer heat. So far as I could make out, this desert extends on the N. to the low hills, offshoots of the higher ranges, and on the S. to the neighbourhood of the sea. We went through this waste land for may be an hour, and then reached the Tangkang River. Its sandy and shallow bed is, at this season, merely a wide stretch of black sand, divided by several streams, all easily fordable, except the farthest one, which we crossed on a large bamboo raft. Towards 2 P.M. we halted at another large village called Bantam, to which a few brick houses gave a look of importance. Some natives told me it was two "pu" (six miles) from Bangkimtsing; others said three "pu." I am inclined to think it is more than ten miles. Another river which we had to cross proved very treacherous, as there were numerous quicksands in it. We experienced some difficulty in getting across, the carriers not knowing the way over, and my baggage narrowly escaped a wetting. From this river to the mountains the country was a vast rice-field, divided off at intervals by stretches of bamboo-grove surrounding villages. At 6 P.M. we reached our destination.

Bangkimtsing lies at a distance of a mile and a half from the mountains. It is a pretty village, and, like the other

hamlets on the plain, is traversed by wide sandy roads. I proceeded at once to the Catholic Mission, where Father Colomer put a large room at my disposal. After dinner I engaged a man to take me up the mountains next morning.

November 11th. Fine, cool breeze, hot sun. My guide arrived punctually towards dawn, and we started for the nearest hills. These form a small range, the highest hill of which, called Capiang by the villagers, attains a height of perhaps 2000 feet. The slopes facing the plain are nearly denuded of timber, except in some few favoured spots, but thick woods clothe the inner slopes from top to base. A fine gorge, enclosed on one side by this first range, runs nearly parallel to the plain for some distance, and then turns off to the E., apparently leading to the high mountains. The hills in this part of Formosa are, I believe, chiefly formed of schists and slate, and the surface of the plain near the hills is covered with slaty stones. I could not reach the forest that day, my guide not having understood where I wanted to go, and being probably afraid to venture too far alone with me. After climbing aimlessly through thick jungle, and neither seeing nor hearing any birds, I went down again, and, following the foot of the hills, reached the opening of the gorge mentioned above, which is some four miles N. of Bangkimtsing. A beautiful stream of clear water flows down the gorge into the plain over a pebbly bed. The outer hills overlooking the stream on its N. bank rise to a height of at least 3000 feet. The forest only appears in patches on their precipitous slopes, while the hills that continue further up the valley seem to be more generally wooded. The inner mountains at the back of Bangkimtsing rise to a good height, 9050 feet according to the Admiralty chart of Formosa. Forest covers them as far as I could see.

Here I made another attempt to ascend the hills, but after proceeding for a short distance up a dry torrent-bed, overshadowed by tall jungle, brushwood and ferns, I had to desist, Ignacio, my guide, telling me that we were in savage territory, where the inhabitants were at war with the Bangkim-

tsing people, and that there was danger of our being speared by some lurking savage. We then climbed up through the jungle to a flat grassy terrace overlooking the plain. It was now so hot that I had to turn back. We crossed the stony riverbed once more, noticing a few birds (*Ægialitis*, sp., and *Motacilla leucopsis*) among the stones. On the bank of this watercourse, half a mile or so from the hills, the Chinese have a fort to guard the pass.

The Bangkimtsing Pepohwans told me that the savages who live among the mountains along the valley and further E. were on friendly terms with them, but that those in the mountains bordering the plain N. of the valley were hostile. There are two places in the neighbourhood of Bamkimtsing where savages come to trade with the Chinese and others. I had no time to visit them, occupied as I was with collecting and preparing specimens. I procured nothing of interest on the way home, with the exception of a Lark (*Alauda wattersi*); this bird was singing on the ground. On getting back to the village I heard that a party had been out pig-hunting that morning. They had shot a sow, which was brought for my inspection. The wild pigs are extremely abundant on the neighbouring mountains, and come down almost every night to the plain to feed on the crops. They are, however, seldom shot, the natives apparently being but poor shots and their powder very bad.

November 12th. To-day being Sunday, there was again no going up to the forest, as this entails a start before daybreak; the heat being still such that the summit of the hills has to be reached before the sun lights up the western slopes. I visited instead a valley some five miles N. of the village. Here are extensive sugar-fields, where Pheasants are said to be numerous. Although Ignacio had a trained native dog with him, and beat the patches of cane assiduously, he failed to put up anything better than a hare and three Quail. One of the latter was probably *Turnix taigoor*. The other two were of the same size as the common Quail, but darker. I shot here a Hwanei (*Trochalopteron taivanum*).

As it was yet early, I strolled along the bank of the stream

and went up the valley, hoping to come across some birds. We had not gone very far when I caught sight of some heads peering at us over some boulders in the stream, and on my pointing these out to Ignacio, he said "Hwan-lang" (savages), and immediately gave an unearthly yell, which was answered at once by the savages. Then followed a shouted conversation, and my guide, turning to me, declared these people to be friendly and known to him, and that they were out fishing; so we made our way towards them through tangled jungle, in which wild pigs had lately been feeding, and soon emerged in an open space in the valley at a stone's-throw from two men armed with spears. As we signalled to them to approach four more appeared. They all joined us at once, and while they were talking with Ignacio, eagerly inspected the contents of the bag he carried. Three of the party were armed with long bamboo spears with iron heads; one of these was arrow-shaped, and had, besides, a hook below the barb, a most murderous-looking weapon; the other two spears had three feathers dangling below the oblong head. The fourth man was armed with the ordinary percussion-gun in use among the Pepohwans. These have a foreign-shaped stock; the barrel is long and tapering, bound to the stock with strips of brass, the stock extending to the muzzle. At my request the man drew the charge for me to look at. The projectiles were three roughly rounded bullets of about the size of an S.S.G. shot. They were destined for a pig or deer, or may be a Chinaman, as the opportunity might occur. All the men carry, besides their gun or spear, a large, broad-bladed cutlass with wooden handle; this knife is secured by metal bands to a thin board, which thus serves as a scabbard. The Pepohwans have also these weapons, using them for various domestic purposes. Two young boys made up the party. The men were short, but good-looking, with large eyes and delicate features. They behaved very civilly, but were eager to get any cartridges from me, rejecting with scorn the empty cases I offered them. After more talk, they left, saying that they were going home to dinner. As I was leaving the place I put up a "Crow-Pheasant" (*Centropus*

bengalensis) out of the long grass and shot the bird, much to the delight of our new friends.

We went home slowly, carefully searching the base of the hills; but beyond a flock of Grey-headed Mountain Bulbul (*Spizixus cinereicapillus*), that were flying on the hill out of reach, and a small Short-tailed Bush-Warbler (*Horornis squameiceps*), I did not notice any interesting birds. The latter was hopping about from twig to twig, uttering a ticking note, something like that of the *Cettias*.

I made arrangements that evening for a visit to the forest next day, and distributed powder and shot to the hunters who were to accompany me.

November 13th. Fine, sky overcast in afternoon. I started before dawn with Ignacio, whose wallet, a strong small-meshed net, was loaded with cartridges, a little rice and tea for the midday meal, and the usual collecting paraphernalia. Two of the hunters followed, and on getting to the foot of the Capiang Hill we were joined by the two others. We had a stiff climb to the forest; there is only grass or low jungle on the slope, except in some ravines, where the devastating Chinaman has allowed the trees to grow undisturbed. We saw a couple of *Dendrocitta formosæ* near the summit of the hill, and these were the only birds identified, whatever birds there were remaining securely hidden in the jungle and long grass.

After picking our way through the sword-grass jungle which skirts the forest along the crest of the hill, we entered the woods, and climbing over fallen trees, pushing over giant ferns, or struggling through a varied undergrowth, we went down the mountain. The ground was carpeted in many places with begonias bearing large pink blossoms. Climbers and creepers of many kinds hung suspended in festoons to the trees, many of them supporting huge bird's-nest ferns, which swung above our heads or found a more secure position in the forks of trees.

In the shady ravines groups of tall tree-ferns raised their graceful crowns nearly to the level of the smaller forest-growth. The moment I had penetrated into the forest I

heard many birds in the foliage overhead, and the natives dispersed in search of them. For my part, I could distinguish nothing, and my companions, with their firing, soon frightened off what birds were within reach of me, and as, with one exception, they proved to be infamously bad marksmen, I found them of little use. However, after many shots, they brought down a *Sibia auricularis*, a forest-bird which seems to be very common here, flying in small flocks among the tree-tops.

A narrow forest-path, which wound round the hill, afforded me good walking for a time. While following this a pretty dark-blue bird (*Notodela montium*) flitting among the underwood was secured; but I saw nothing else, and my Pepohwan friends, who had seemed, from the fusillade higher up in the woods, to be having good sport, contributed but little to the bag; for, when we had met at noon to rest and eat our rice, their only captures were another *Sibia auricularis*, a squirrel with red underparts, and a large tree-frog.

The spot chosen as resting-place was on the bank of a little rivulet, which had here formed a tiny pool, overshadowed on the other side by tall trees. Fresh traces of a fire showed that savages had recently been here, and, in fact, the place where I had met the aborigines yesterday was just below us.

We now retraced our steps, and at last I began to meet with a few birds. Parties of *Alcippe morrisonia* were chattering in the thickets, several *Sibia auricularis* were passing overhead flying from tree to tree, a couple more of the Blue Warbler (*Notodela montium*) were shot in the underwood, and as I was standing still, listening and waiting for something to come along, a Barbet (*Cyanops nuchalis*) came and perched on a tree close by. I shot it, and presently secured another at the same spot. A flock of Black Mountain-Bulbul (*Hypsipetes nigerrimus*) flew by, as well as other birds which I did not recognize. My hunters also shot a few birds, among which were a pretty Minivet (*Pericrocotus griseigularis*), a Formosan Tree-Pie (*Dendrocitta formosæ*), and a *Liocichla steeri*. We heard the Formosan Long-tailed Jay

(*Urocissa carulea*), a bird which seems rather rare here, but the hunters, who had gone after them, could not shoot one, and though, on their subsequent visits to the forest, they occasionally met with them, they were unable to get me a specimen. On coming to an open space on the mountain-side we had a splendid view of the hills and valley. On our left, across the gorge, were the hills called "Kawasan" by the natives, which had mostly but a growth of jungle covering them, though here and there forest showed in dark patches. Beyond, in the E., were the high mountains, almost virgin country, trodden only by the savages who inhabit them. Beautiful butterflies kept flying past, and once a pretty Tit, with bright yellow underparts and black median line (*Parus insperatus?*), came out of the jungle on the other side of a gully and remained gazing at us till frightened away by a shot.

I saw no birds on our way back to the top of the hill. It was tiring and rough walking, mostly through thick scrub, with an occasional climb over a fallen tree. Once back on the W. slope, the return journey was easy enough. An *Emberiza spodocephala*, which I brought down as it flew overhead, was the only bird identified on the way down. We reached home before dark, meeting many peasants, either coming back from the hills, where they had been cutting grass, or wending their way home with their buffaloes from the rice-fields. The fact that the peasants go to their work on the hills, or in the fields near them, armed with gun or spear, is suggestive of the unsettled condition of affairs on this borderland. Fear of the savages, even of those with whom they are on friendly terms, seems predominant in the mind of the Bangkimsing natives. As a rule, hunters will not go shooting on the hills except in parties of three or four individuals.

November 14th. Fine. Day spent in preparing birds and other specimens shot yesterday. Some hunters who had gone out for me brought back a few birds: *Pericrocotus griseigularis*, *Hyps. nigerrimus*, a young *Cyanops nuchalis*, *Dendr. formosæ*, a fine male *Calliope kamschatkensis*, and some other common

birds. Ignacio, who went out with them, caught a pretty little Quail (*Excalfactoria chinensis*).

November 15th. Dull, showers. I went up Capiang Hill before daybreak. This time Ignacio alone accompanied me. While toiling up the mountain we caught a glimpse of a large bird, which was, I believe, a *Spizaëtus*, as he rose out of a gully and disappeared over a ridge. In the brushwood on the lower part of the hills I saw a few *Troch. taivanum* and *Pom. musicus*, and towards the top heard the Tree-Pie (*Dendrocitta formosæ*). The direction we took was much the same as that pursued on the 13th. We went over the crest of the hill among the woods, meeting at first little success. I saw several birds, however, which I did not recognize and was unable to shoot; then, after I had reached a rather more open part of the forest, I heard two birds calling to each other with a peculiar whistle. Ignacio now told me that this was the call of a bird known to him; he had fired at and wounded one the day before, but had failed to secure it. The description he gave of it was almost that of *Pitta oreas*, so I remained still for a long time, answering the call; but all in vain, as nothing came along. I subsequently offered a reward for a specimen, but none were ever brought to me.

My first capture was again a *Notodela montium*, just finishing its moult. Lower down a flock of Minivets (*Pericrocotus griseigularis*) settled with loud screams on the trees overhead. A couple of Black Drongos (*Buchanga atra*) were after them, contributing more than their share to the uproar. I shot two of the Minivets, both of them green-and-yellow birds. A small orchid, with an insignificant little green flower, was abundant here, growing on the large creepers; it is the only orchid I noticed in these woods. A kind of cinnamon also occurs, the bark of the long trailing roots being the part used as spice. My guide told me that it was used for perfuming native tobacco. Near the spot where we had rested on the 13th we struck a native path which led straight uphill. My companion was unwilling to follow it, saying that it led to a village of the aborigines, but, after a little pressing,

he consented to go on as far as the top of the hill. As I expected, the walk was most interesting; the path was wide and well kept; every now and then we came to a level open space, where the savages had been camping or cutting wood. Resting at one of the clearings, we ate our midday rice, seated on billets of wood left by the natives. The melancholy call ("too-too-too-too-lo-too-leeoo") of a Barbet high up on the mountain, and the scream of a bird of prey, which Ignacio said was that of the *Spizaëtus*, were the only sounds to be heard till the calm was broken by a swish of wings and a loud twittering and screaming, announcing the arrival of a flock of Black Bulbuls (*Hypsipetes nigerrimus*) on the neighbouring trees. When they had gone a Tree-Pie was observed hunting for insects or fruit on a tree close by, silently inspecting the foliage, to which it hung in the fashion of a Tit. A short way further up I had the good fortune to secure a fine adult male Barbet (*Cyanops nuchalis*), as it sat motionless on a branch, with its tail comically perked up. In a part of the forest free from thick undergrowth I shot a small bird which had alighted in front of me under the shelter of a large fern; this was a specimen of the pretty little *Horornis squameiceps*.

We passed by an old pitfall dug by the savages; a young tree that grew from its centre must have been originally the stake planted there to kill the trapped game. Now, to improve matters, it began to rain. It was quite dark when, tired and wet through, we reached the Mission. We had walked twelve hours.

Some men brought in during the evening a few birds: *Motacilla leucopsis* in full breeding-dress, *Alauda wattersi*, a lovely male *Myiagra azurea*, *Pomatorhinus musicus*, and others. I also purchased a young *Turnix taigoor*, which I afterwards took to Amoy.

November 16th. Fine, rain later. Skinned birds till 3 P.M., then went out for a stroll about the village. Shot *Cettia minuta*, *C. canturiens*, *Pom. musicus*, which are common in the bamboo-edges. Others found in similar places are *Zosterops simplex*, *Pycnonotus sinensis*, *Oriolus diffusus*, *Buchanga atra*, and, in the fields, numbers of *Motacilla taivana*, *Anthus*

cervinus, &c. The hunters, who had gone out again, brought, besides birds already obtained, a female *Turdus albiceps*, with head in moult. The man who shot this told me that there was a flock of six or seven, and that he noticed the white heads of the males. They had also *Alcippe morrisonia*, *Cettia canturiens*, and a *Spizixus cinereiceps* in good plumage, except that several of the tail-feathers were only a third grown.

November 17th. Fine. Out at dawn, with two hunters and Ignacio, who were followed by two trained native dogs. They beat the patches of sugar-cane in the plain ineffectually, and we only saw one Pheasant, which was flushed out of a field of ground-nuts when least expected. I shot a couple of Quail (*Turnix taigoor*). Large numbers of Doves were on the plain—*Turtur chinensis* and another, probably *T. rupicola*,—which had come down from the hills for a morning feed. In beating the brushwood about the foot of Capiang Hill we put up a covey of Bamboo Partridges (*Bambusicola sonorivox*), one of which I shot, and we also secured a little Scops Owl. This bird, being only winged, I brought back to Takow, but after being tended with great care, to my disappointment, it escaped. It was probably *Scops hambroeki*. Iris yellow; plumage suffused with rusty red; underparts unspotted; tarsi distinctly rufous and feathered to within $\frac{1}{2}$ inch of the foot. Size very small, probably 19–20 centimetres.

One of the hunters unfortunately missed a Green Pigeon (*sp. inc.*) a short way up the hill, which mishap much annoyed me, as I was anxious to get one of these birds, and hitherto had not even seen one.

I was back at noon and spent the rest of the day preparing birds. With a few common birds was brought in a female Redstart (*Ruticilla aurea*). Made my preparations to leave Bangkimtsing early next morning, without much regret, as the locality had hardly come up to my expectations. The distance from the forest is too great to make Bangkimtsing a good centre. The villagers, too, though they know the country well, are of little use as collectors. In order to work this part of Formosa successfully it would be absolutely

necessary to stay altogether in the mountains. For this the goodwill and assistance of the savages is indispensable, and the collector would probably have to leave his Chinese assistant or servant behind and live in the savages' villages.

November 18th. Fine, cooler. The chair-bearers and carriers were punctual, and we left at 6 A.M. I walked to the first river. Amongst other birds I saw a good many Golden Plovers (*Charadrius fulvus*) and several Snipes. A few Striped Harriers (*Circus spilonotus*) were quartering the rice-fields, and I saw two other Harriers, which I took to be *C. aruginosus*, but they had apparently pure white heads and shoulders. On looking over the descriptions I have of this species, I find no mention of the white shoulder, nor do I remember this feature in the many Marsh-Harriers which I collected in China, so I came to the conclusion that these birds were of some species unknown to me. [“The Marsh-Harrier has not unfrequently, in imperfectly adult plumage, a patch of the same *yellowish* white on the ‘shoulder’ as on the crown, which seems to point to Mr. de La Touche’s first idea as correct.”—H. H. S.]

Nothing of interest was observed during the rest of the return journey, except a pair of Crested Mynahs, perched, in company with a crowd of Black Drongos, on some high bamboos. I remained several days at Takow before returning to Amoy, but did little in the way of bird-collecting; the neighbourhood has been so thoroughly worked by Swinhoe that nothing remains to be done. On one day I went with Frère Giner to visit a lake and some marshes where Ducks were said to be plentiful. At a narrow sedgy marsh, some two miles from Chimkim, we found many Snipes. Leaving this, we made our way across paddy-fields to a low range of hills, called the Pineapple Hills, N.E. of Takow. We saw on the plain *Circus spilonotus*, *Cisticola sp. inc.*, many Golden Plovers, *Anthus cervinus*, *Motacilla taivana*, *Buchanga atra*, &c. The lake is surrounded by low hills, a belt of high bamboos on its northern shore, on the S. a village, with fine banyans overshadowing the water. A large flock of ducks (*Fuligula cristata*?) were resting on the water. They were

quite unapproachable : we pursued them in " tekpai " (bamboo rafts)—a most inconvenient kind of craft for this work—but gave it up in disgust. The water at the lake-edge was covered with a wide band of *Limnanthemum indicum*, a pretty water-plant with broad flat leaves and a small fluffy white flower. Several Jacanas (*Hydrophasianus chirurgus*) were walking over the leaves, and, with a Night Heron, shot by Fr. Giner, were the only other birds we saw. The only other birds of interest noticed near Takow during the rest of my stay were Red-rumped Swallows, Swifts (*Cypselus subfucatus*), and two large Grey Wagtails with white wings, the primaries just tipped with black, no doubt *Motacilla lugens*.

I crossed the channel on the night of the 30th November, and reached Amoy next morning.

II.—Narrative of the Expedition of 1894.

At the beginning of February 1894, the Revenue cruiser being in port, bound for the Pescadores Islands and the S. coast of Formosa, I obtained leave of absence and left Amoy on Feb. 8th. It blew so hard that we did not cross till the 10th, and anchored that afternoon before Fisher Island. Numbers of Albatrosses (*Diomedea albatrus*), adult and dark-brown birds, probably the young of this species, were seen during the day, some coming quite close to the ship. About Fisher Island they absolutely swarmed. The Pescadores are so well known that a description is unnecessary. They are all more or less flat-topped. Fisher Island (the only island we visited) is perfectly bare of trees. The flat plateaux and intervening valleys are all cultivated, ground-nuts, sweet potatoes, and millet being the crops. The soil is reddish and sandy, and the rock-formation columnar basalt. I saw few kinds of birds. Rock-Thrushes (*Monticola solitarius*) were rather common; Golden Plovers (*Charadrius fulvus*) were in flocks on the plateau near the lightship; Larks (*Alauda wattersi*) were common and were very tame. I shot a couple for specimens, and was surprised to find the plumage strongly tinged with reddish ochre, thus presenting a strong contrast to the birds obtained in Formosa, which have little, if any, rufescence on

the upper parts. As the plateaux of the Pescadores are at this season quite bare of vegetation, there is no protection for any field-birds from the birds of prey; this would seem to be remedied by the birds putting on (in winter?) a reddish plumage, which makes them almost invisible when crouching on the shallow ridges of the fields. These three species, with the ubiquitous Sparrow, were all the birds we noticed on this occasion.

We left the Pescadores next morning, Feb. 11th, and by noon were in sight of Formosa. The great plain which extends along the west coast, and stretches across to the feet of the central chain of mountains, terminates about 40 miles from the S. of Formosa. Thence to the South Cape the mountains rise very near the sea-shore. Rounding the flat-topped S.W. cape, enclosing one side of Kualiang Bay, we saw ahead the lighthouse standing on the South Cape, which is also a flat-topped headland of coralline limestone. A coral-reef surrounds the cape, but boats can reach a jetty, erected by the lighthouse authorities, through an artificial passage. There we landed, and while the lighthouse-stores were being landed I went for a walk in the jungle, which reaches down to the beach. A shady path led inland, and, tempted to explore it, I started in pursuit of a Bulbul whose unfamiliar call had attracted my attention at once on landing. I suspected it to be Mr. Styan's recently described *Pycnonotus taivanus* (Ibis, 1893, p. 470), but it was shy, and I was unable to ascertain for certain. I made my way up to the cliff, which is clothed with luxuriant vegetation. The Bulbuls were calling in every direction, as were also *Troch. taivanum*, *Pomat. musicus*, *Oriolus diffusus*, and other birds. Near the foot of the cliff I flushed a Button Quail (*Turnix taigoor*?), and a few yards further on a Dove, with barred lower back (*Chalcophaps indica*?), flew rapidly by, and was gone before I could get my gun up. I made my way through open grassy ground to the flat plateau above the lighthouse, which was covered with a low jungle of pandani and some good-sized date-palms. Here the Bulbuls were abundant, flying in twos and threes from one date-palm to another, but so shy as to be un-

approachable. They were very vociferous; the call is louder and more mellow than that of *Pycn. sinensis*, and, but for the call and the black cap, they might easily be mistaken for that species. I walked on till I reached the outer edge of the promontory facing the Pacific, then made my way to the lighthouse through the tangled pandanus scrub. At last I had the chance to shoot a Bulbul, and it was, as I expected, Mr. Styan's new bird. I saw also two black birds, probably *Hypsipetes nigerrimus*, and a Thrush (*sp. inc.*). There was a fine Swinhoe's Pheasant (*Euplocamus swinhoii*) at the lighthouse, and also some green Doves (*Chalcophaps indica*), the latter destined for Amoy. We returned to the jetty by a fine wide road. It had been very hot during our stay ashore, the heat being all the more noticeable as we had left Amoy in mid-winter. This calm muggy weather soon changed, however, for a stiff north-easter came down in the evening, and it blew hard in the night, with heavy showers of rain. Next morning (the 12th) the weather was still bad. I went ashore in the first boat, towards 6 A.M. There were few birds in the jungle round the cape. I saw *Hyps. nigerrimus*, heard Bamboo Partridges (*Bambusicola sonorivox*), and shot a *Pomat. musicus*. While wandering about the foot of the cliff I came upon a Crested Eagle perched on a large bare tree (the third example I had seen in Formosa), but failed to secure it. Styan's Bulbul was abundant, though wild, and flew about in small flocks of five or six. I managed to get another. Orioles were common, also a brown Thrush, with a Blackbird-like note of alarm (*Turdus pallidus?*), and a black bird with white head, seen flying into the jungle, was, I presume, *Turdus albiceps*. Towards 10 o'clock we embarked, taking with us the lighthouse-keeper. Mr. Wilnau, the present keeper, is a zealous collector for the Copenhagen Museum, and is likely to make many interesting discoveries, as the locality is an almost unknown and very promising one. We left at 11 A.M. for Takow, and next day (Feb. 13th) the latter for the Pescadores. Waiting there for fine weather to cross to Amoy, some of us landed on Fisher Island. A couple more Larks and a pair of Rock-Thrushes (*Mont. solitarius*) were shot,

also a Golden Plover and some Sand-Plovers (*Ag. cantianus*). I saw a Peregrine Falcon, and (I believe) a Kestrel. The only green stuff noticed was a hedge or two of *Euphorbia*, a tamarisk, and a few fruit-trees in a village. On the 15th we reached Amoy at 4 P.M.

The following is a list of the birds observed or obtained in S. Formosa and the Pescadores during my two trips. I am much indebted to Mr. C. B. Rickett for identifying several of the birds collected, and to the Rev. H. H. Slater for identifying several others and for revising these notes. My best thanks are also due to the communities of Anping and Takow, and in particular to my amiable hosts Messrs. Bain and Macgowan, and to Dr. Myers and Mr. F. Cass of Amoy, for their hospitality and many kindnesses in connection with my visit to Formosa.

III.—*List of the Birds obtained, with Remarks.*

1. MERULA PALLIDA.

South Cape.

2. MERULA ALBICEPS.

Bangkimtsing (forest). South Cape?

3. SIBIA AURICULARIS.

Baksa, Bangkimtsing (forest).

Stomach of one specimen contained flies and what appeared to be the remains of a berry. Most of the specimens shot were moulting.

Bangkimtsing name "Soaⁿ Lau ba."

4. POMATORHINUS MUSICUS.

Baksa, Bangkimtsing (village and lower hills), South Cape, and plain generally. Most of the November specimens are partly in moult.

Stomach of one specimen contained seeds and remains of insects.

Baksa name "Kok kong mai." Bangkimtsing name "Hoe-bi ku."

5. *POMATORHINUS ERYTHROCNEMIS*.

Common at Baksa, but not heard at Bangkimtsing. It frequents jungle and brushwood on the hillsides.

Baksa name "Kok kong mai."

6. *TROCHALOPTERON TAIVANUM*.

Abundant everywhere on the plain and lower hills.

Stomach of one specimen contained beans or berries, remains of insects, and gravel.

Native name "Hoe bi."

7. *MONTICOLA SOLITARIUS*.

Baksa valley and Bangkimtsing. Extremely abundant at Takow; Fisher Island (Pescadores).

Bangkimtsing name "Phu khit."

8. *RUTICILLA AUROREA*.

Bangkimtsing, Takow.

9. *CALLIOPE KAMSCHATKENSIS*.

♂. Bangkimtsing.

10. *NOTODELA MONTIUM*.

This bird frequents the underwood in the forest on Capiang Hill, Bangkimtsing, alt. 1300 ft. to 2000 ft. It is active and rather shy, somewhat resembling in its ways the Blue-tailed Warbler (*Tarsiger cyanurus*). I never saw more than one at a time, and did not see any females. One specimen (15th Nov.) was just finishing its moult.

Stomach of one bird contained remains of a caterpillar.

11. *PRINIA SONITANS*.

I believe that I heard this bird in the Baksa valley.

12. *PRINIA INORNATA*.

Common. One of two shot on Apes' Hill, Takow, has the tail-feathers still in the shaft.

13. *CISTICOLA*, sp. inc.

Takow plain.

14. *CETTIA (HORORNIS) SQUAMICEPS*.

Bangkimtsing (forest and valley).

15. *CETTIA CANTURIENS.*16. *CETTIA CANTANS MINUTA.*

Both common in bamboo-hedges about Bangkimtsing village.

17. *LIOCICHLA STEERII*, Swinhoe, Ibis, 1877, p. 474, pl. xiv.

One female shot in forest on Capiang Hill, Bangkimtsing. Stomach contained remains of berries. Colour of soft parts as follows:—*iris* reddish brown; *bill* dark greyish purple; *legs* reddish grey.

18. *ALCIPPE MORRISONIA.*

Common on the Baksa hills and in forest on Capiang Hill, Bangkimtsing.

Stomach of one specimen contained seeds and berries.

19. *ALCIPPE BRUNNEA.*

Common in Baksa valley. One specimen from forest on Capiang Hill.

Most of the specimens procured were moulting.

Contents of stomach in one case were caterpillars, remains of insects, and green stuff; in another, remains of insects and seeds.

20. *STACHYRIDOPSIS RUFICEPS.*

♂. Baksa.

21. *PARUS INSPERATUS?*

Forest on Capiang Hill, Bangkimtsing.

22. *MOTACILLA LUGENS?*

Takow.

23. *MOTACILLA LEUCOPSIS.*

Very common all over the lowlands and in the valleys. I saw many in apparently full breeding-plumage during November.

24. *MOTACILLA TAIVANA.*

Abundant on the plain, in valleys, and on Apes' Hill, Takow.

25. *CALOBATES MELANOPE.*

Fairly common on mountain-streams.

26. ANTHUS CERVINUS.

Abundant on the plain.

27. ANTHUS RICHARDI ?

Apes' Hill, Takow.

28. HYPSSIPETES NIGERRIMUS.

Baksa, Bangkimtsing (forest), and South Cape.

Stomach of one bird contained the remains of a berry.

Bangkimtsing name "Soaⁿ O chhiu."

29. PYCNONOTUS SINENSIS.

Abundant on plains and lower hills; replaced at South Cape by the following species.

Native name "Pa thau kok."

30. PYCNONOTUS TAIVANUS, Styan, Ibis, 1893, p. 470; 1894, p. 337, pl. ix.

South Cape.

One of my two specimens measures 203 mm. *Iris* dark red; *bill* and *legs* black. In describing this species Mr. Styan omitted to mention the yellow vent.

The South Cape is evidently the locality whence Mr. Styan's bird was procured. As noted above, *P. taiwanus* is abundant there, but is very wild. I did not see this species at Baksa, Bangkimtsing, or about the ports of Anping and Takow, so it is probably confined to the hilly country in the southern extremity of the island; it is possible, however, that it may stray along the east coast.

In connection with the rather restricted range of this Bulbul, it is interesting to read that the southernmost part of Formosa was originally a coral island*.

31. SPIZIXUS CINEREICEPS.

Specimens in moult procured at Baksa and Bangkimtsing.

32. ORIOLUS DIFFUSUS.

Common at Baksa, Bangkimtsing, and South Cape.

Native name "Ng yéng."

* See a paper on the Geology of South Formosa, by George Kleinwächter, Journal N. C. B. of Royal Asiatic Society, 1883.

33. BUCHANGA ATRA.

One of the most striking features of the bird-life of South Formosa, as compared with that of the opposite mainland, is the abundance of the Black Drongos. These birds are found everywhere, and in the plain take up the part played by the Crested Mynah (*Acrid. cristatellus*) in South China. Like the Mynahs, they attend cattle in the fields, using in the marshes the back of these animals as a perch. Near the sea they develop aquatic tastes, for I saw one, one day, pouncing on fish in a creek. The stomach of a specimen shot at Anping contained water-beetles and the head of a small fish. Further inland they are abundantly distributed over the flat country, valleys, and lower hills, and I even saw them on the top of Capiang Hill (alt. about 2000 ft.). On the coast of Fukien and about Swatow, where the Mynahs are so abundant, they are uncommon.

The native name is "O chhiu."

34. PERICROCOTUS GRISEIGULARIS.

Common in the forest on Capiang Hill, Bangkimtsing.
Stomach of a specimen contained flies.

35. LANIUS SCHACH.

Common on lowlands.

Bangkimtsing names "Lau ba" and "Pit lo chian."

36. LANIUS LUCIONENSIS.

One young bird shot at Baksa. I noted at Takow small brown Shrikes, which were probably of this species.

37. MYIAGRA AZUREA.

Abundant on the lowlands and at Baksa (hills and valley). Frequents bamboo-jungle &c. on lower hills and bamboo-hedges in villages. Not noticed in forest. Its cry and ways remind one of the Paradise Flycatchers, *Tchitrea incii* and *T. princeps*.

38. HIRUNDO GUTTURALIS.

Seen on the plain.

39. HIRUNDO NIPALENSIS?

Many were seen at Takow and Bangkimtsing, but not obtained.

40. *COTILE SINENSIS.*

Seen flying about sandstone cliffs on the way to Baksa, and also at Takow.

41. *MUNIA TOPELA.*

Abundant everywhere. Seems to breed till late in autumn.

42. *MUNIA ACUTICAUDA.*

Abundant.

43. *MUNIA FORMOSANA.*

Seen on grassy hillsides at Baksa.

44. *EMBERIZA SPODOCEPHALA.*

Bangkimtsing, Takow, and South Cape.

45. *PASSER MONTANUS.*

46. *ALAUDA WATTERSI.*

Common in the plains of South Formosa in grassy places and on the plateaux on Fisher Island, Pescadores. Legs are flesh-coloured, with darker joints. Testes in two Formosan specimens were well developed.

There seems to be no appreciable difference in the size of Formosan and Pescadorian specimens, but the difference in colour is very marked, the reddest of the Formosan birds (three) being far removed from the darkest of the Pescadorian birds (four).

47. *STURNIA SINENSIS.*

Bangkimtsing.

Bangkimtsing name "Kho lieng ku."

48. *ACRIDOTHERES CRISTATELLUS.*

The Crested Mynahs are very uncommon in the plains east of Taiwanfu and Takow. They are rather more often seen about Takow. It would seem as if they had been imported by the Chinese in years gone by.

Native name "Ka ling."

49. *PICA CAUDATA.*

Native name "Kheh chian."

50. *UROCISSA CERULEA*.

Heard in forest on Capiang Hill, Bangkimtsing. They seem to be very shy.

51. *DENDROCITTA FORMOSÆ*.

Common in forest, Bangkimtsing. Stomach of a specimen contained fruit, beetles and other insects.

Bangkimtsing name "Soaⁿ kheh chian."

52. *CYPSELUS SUBFURCATUS*.

Seen on Apes' Hill, Takow.

53. *IYNGIPICUS SCINTILLICEPS*.

One male, shot by a native at Baksa. I did not meet with any Woodpeckers during my stay south in Formosa.

54. *ALCEDO BENGALENSIS*.

Abundant.

Bangkimtsing name "Tio hi ang."

55. *CENTROPUS BENGALENSIS*.

♂. Bangkimtsing.

Stomach contained grasshoppers.

Bangkimtsing name "Bang khieng."

56. *CYANOPS NUCHALIS*.

Of four specimens procured at Bangkimtsing, one adult male has a conspicuous nuchal patch, another male has very slight traces of it, and a female has it fairly well marked. The patch is not apparent on a young bird, probably not many weeks out of the nest.

Stomach of one specimen contained leaves, and that of another fruit.

57. *SCOPS HAMBROECKI*.

Shot at foot of hills near Bangkimtsing.

Bangkimtsing name "Nian than chian." This name, so the natives told me, is also given to the large Owls.

[From the description on page 325, this seems to be *S. hambroeki*.—H. H. S.]

58. SCOPS PENNATUS.

♀. Bangkimtsing. Bought from a native. *Iris* yellow.

Bangkimtsing name "Phu chian." It is strange that the natives should distinguish between these two species of *Scops*, but this seems certainly to be the case.

59. CIRCUS, sp. inc.

I do not know to what species the Harriers seen on the return journey from Bangkimtsing should be referred. They may be roughly described as having a white head, a white shoulder-patch, and general colour brown.

[Doubtless *C. aeruginosus*.—H. H. S.]

60. CIRCUS SPILONOTUS.

Common on the plain.

61. SPIZAËTUS NIPALENSIS?

Crested Eagle seen at Baksa, Bangkimtsing, and South Cape.

62. ACCIPITER VIRGATUS.

♂ ♀. Baksa.

The stomach of the female contained insects. Other Sparrow-Hawks, probably of the same species, were seen at Baksa.

63. FALCO TINNUNCULUS.

Common.

64. MILVUS MELANOTIS.

Common.

Native name "La hioh."

65. PHALACROCORAX, sp. inc.

We twice saw a Cormorant flying overhead, when climbing the hills at Bangkimtsing.

66. CHALCOPHAPS INDICA.

South Cape.

Mr. Arthur, of Messrs. Bain & Co., Anping, very kindly sent me a live example from Anping. "Provenance" of bird unknown.

The Bangkimtsing natives seemed to be well acquainted with some kind of green Pigeon which they call "Kim ka tsui" (golden or metallic Pigeon; but I was not able to procure a specimen, and am still unable to state what kind or kinds of green Doves are to be found in that neighbourhood.

67. TURTUR CHINENSIS.

Abundant on the plain. Occurs sometimes in very large flocks.

Native name "Ka tsui."

68. TURTUR RUPICOLA.

Common on the hills.

Native names "Pang ka" and "Ka tsui."

69. EXCALFACTORIA CHINENSIS.

A male caught alive at Bangkimtsing (lower hills).

70. TURNIX TAIGOOR.

Common at Bangkimtsing.

71. BAMBUSICOLA SONORIVOX.

Abundant on Baksa hills, Bangkimtsing, and South Cape.

Native name "Ti ke."

72. PHASIANUS FORMOSANUS.

I saw *one* Pheasant at Bangkimtsing and none at Baksa. However, sportsmen have told me that there is excellent Pheasant-shooting not far north of Bangkimtsing.

Native name "Ti ke."

73. EUPLOCAMUS SWINHOII.

South Cape.

A very fine live example has been sent to me from Bangkimtsing by Fr. Colomer.

74. HYDROPHASIANUS CHIRURGUS.

Lake near Takow.

N.B.—I paid little or no attention to shore- and other water-birds during my stay in Formosa. I, however, noted the following:—*Ægialitis cantianus*, *Charadrius fulvus*, *Totanus hypoleucus*, *Tot. ochropus*, *Tot. glareola*, Spoonbills (sp. inc.), Snipes, Coots, Dabchicks, &c.